



## ATTACHMENT C Amendments to the Claims

Please cancel claim 27 and 31-32 without prejudice or disclaimer.

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) A purified ULIP polypeptide comprising the amino acid sequence of SEQ ID No. 8.
2. (Canceled)
3. (Previously Presented) An isolated nucleic acid comprising a cDNA sequence coding for a ULIP polypeptide of amino acid sequence SEQ ID No. 8.
4. (Previously Presented) The isolated nucleic acid according to Claim 3, comprising the sequence of SEQ ID No. 7.
5. (Canceled)
6. (Previously Presented) A cloning and/or expression vector containing a nucleic acid sequence according to Claim 3.
7. (Currently Amended) A An isolated host cell transfected by a vector according to Claim 6.

8. (Canceled)

9. (Currently Amended) A composition useful for the diagnosis of paraneoplastic neurological syndromes in which anti-CV2 antibodies are expressed and for the ~~early~~ diagnosis of the formation of tumors ~~in which anti-CV2 antibodies are expressed~~ associated therewith, said composition comprising a purified polypeptide comprising amino acid sequence SEQ ID No. 8.

10. (Currently Amended) A method for detecting the presence of anti-CV2 antibodies in a biological sample, comprising:

- contacting a biological sample with a purified ULIP polypeptide comprising SEQ ID No. 8, ~~a derivative thereof~~ or a fragment thereof that binds to anti-CV2 antibodies, or with a polypeptide encoded by a nucleic acid comprising the nucleotide sequence of SEQ ID No. 7; and
- detecting specific immunological complexes optionally formed, the specific immunological complexes being indicative of the presence of anti-CV2 antibodies.

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Currently Amended) A method for the diagnosis of paraneoplastic neurological syndromes in which anti-CV2 antibodies are expressed and for the ~~early~~ diagnosis of the formation of tumors ~~in which anti-CV2 antibodies are expressed~~ associated therewith, comprising:

- contacting ~~a sample~~ sample, taken from an ~~individual~~ individual, with a purified ULIP ~~polypeptide~~, polypeptide comprising SEQ ID No. 8, ~~a derivative or a fragment thereof that binds to anti-CV2 antibodies~~, optionally attached to a support under conditions allowing the formation of specific immunological complexes between the polypeptide and the auto-antibodies ~~optionally~~ present in the blood sample, and
- detecting specific immunological complexes ~~optionally~~ formed, the specific immunological complexes being indicative of a paraneoplastic neurological syndrome or of a tumor.

15. (Currently Amended) A kit for the diagnosis ~~in of~~ paraneoplastic neurological syndromes in which anti-CV2 antibodies are expressed, said antibodies in a biological sample, and for ~~deleting early the~~ diagnosis of the formation of tumors ~~in which anti-CV2 antibodies are expressed from a biological sample~~ associated therewith, comprising:

- at least one purified ULIP polypeptide comprising SEQ ID No. 8, ~~a derivative of the ULIP~~ or a fragment thereof that binds to anti-CV2 antibodies, said polypeptide or fragment optionally attached to a support, and
- means of visualization of the formation of specific antigen/antibody complexes between an anti-POP-66 auto-antibody and the purified ULIP ~~polypeptide~~,

~~derivative or polypeptide~~ polypeptide or fragment and/or means of ~~qualification~~  
quantification of these complexes.

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Currently Amended) A method of diagnosing a paraneoplastic syndrome in  
which anti-CV2 antibodies are expressed in a subject, said method comprising the steps  
of:

- contacting a sample from the subject with a purified polypeptide  
comprising ~~a purified ULIP polypeptide selected from the group consisting of amino acid~~  
SEQ ID No. 8, ~~a derivative or biological active polypeptide~~ or a fragment thereof that  
bind to anti-CV2 antibodies, said contacting carried out under conditions sufficient to  
allow the formation of specific immunological complexes between the ~~peptide~~  
polypeptide or fragment thereof and anti-CV2 antibodies present within the sample; and

- detecting the specific immunological complexes formed;  
wherein the presence of immunological complexes is indicative of a paraneoplastic  
syndrome in said subject.

21. (Currently Amended) The method of claim 20, wherein the polypeptide ~~is~~  
consists of SEQ ID No. 8.

22. (Currently Amended) The method of claim 20, wherein the polypeptide is ~~an antigenic~~ a fragment of a polypeptide comprising amino acid sequence SEQ ID No. 8.  
No. 8, wherein said fragment binds to anti-CV2 antibodies.

23. (Canceled)

24. (Currently Amended) A method of diagnosing a paraneoplastic syndrome in which anti-CV2 antibodies are expressed in a subject, said method comprising the steps of:

- contacting a sample from said subject with a peptide capable of forming a specific immunological complex with an antibody, said antibody capable of forming a specific immunological complex with a polypeptide comprising amino acid sequence SEQ ID No. 8, wherein said contacting is carried out under conditions sufficient to allow the formation of specific immunological complexes between the peptide and antibodies present within the sample; and

- detecting the specific immunological complexes formed between the peptide and antibodies in the sample;

wherein the presence of immunological complexes formed between the peptide and antibodies is indicative of a paraneoplastic syndrome in said subject.

25. (Currently Amended) A method of diagnosing the formation of a tumor ~~that elicits an auto-immune response in a subject that results in the subject expressing~~ associated with expression of anti-CV2 antibodies, said method comprising the steps of:

- contacting a sample from said subject with a polypeptide comprising amino acid sequence SEQ ID No. 8 or a fragment thereof that binds to anti-CV2 antibodies, said contacting carried out under conditions sufficient to allow the formation of specific immunological complexes between the peptide and antibodies present within the sample; and
- detecting the specific immunological complexes formed;

wherein the presence of immunological complexes is indicative of the formation of a tumor in said subject.

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Currently Amended) A method of diagnosing the formation of a tumor ~~that elicits an auto-immune response in a subject that results in the subject expressing~~ associated with expression of anti-CV2 antibodies, said method comprising the steps of:

- contacting a sample from said subject with a peptide capable of forming a specific immunological complex with an antibody, said antibody capable of forming a specific immunological complex with a polypeptide comprising amino acid sequence SEQ ID No. 8, wherein said contacting is carried out under conditions sufficient to allow

the formation of specific immunological complexes between the peptide and antibodies present within the sample; and

detecting the specific immunological complexes formed between the peptide and antibodies in the sample;

wherein the presence of specific immunological complexes formed between the peptide and antibodies is indicative of the formation of a tumor in said subject.

30. (Currently Amended) A reagent for *ex vivo* identifying antibodies to a polypeptide ~~according to claim 4~~ in a subject, said reagent comprising:

a solid support; and

a peptide comprising ~~an antigenic portion~~ a fragment of said the polypeptide of claim 1 wherein the fragment binds to anti-CV2 antibodies, said fragment attached to said support.

31. (Canceled)

32. (Canceled)

33. (Currently Amended) A diagnostic kit for identifying antibodies to a polypeptide comprising amino acid sequence of SEQ ID No. 8 in a subject, said kit comprising ~~an antigenic portion~~ a fragment of said polypeptide ~~or a derivative thereof~~ that binds to anti-CV2 antibodies.

34. (Currently Amended) The kit of claim 33, wherein the kit further comprises means of visualizing formation of ~~said polypeptide-antibody~~ complexes between said fragment and antibodies to the polypeptide comprising amino acid sequence of SEQ ID No. 8.

35. (Currently Amended) The kit of claim 33, wherein the ~~antigenic portion~~ fragment of said polypeptide is purified.